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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,761	03/30/2004	Gen Koshita	KPM-02101	5275

7590 05/06/2005

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EXAMINER

CUNNINGHAM, TERRY D

ART UNIT PAPER NUMBER

2816

DATE MAILED: 05/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/813,761

Applicant(s)

KOSHITA, GEN

Examiner

Terry D. Cunningham

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/30/04</u> . | 6) <input type="checkbox"/> Other: ____ |

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DETAILED ACTION***Claim Objections***

Claim 19 is objected to as being informal. In line 10, "capacitors" should be changed to --capacitor--. In line 12, "capacitor" should be changed to --capacitors--. Claim 20 is objected to as including the informality of claim 19. Appropriate correction is required.

Claim Rejections - 35 USC § 112

Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, lines 10-15, there is no support in the specification for the connection of the "first charge pump" to the "second charge pump" being responsive to the "first switch signal" and the "control signal". As seen in Fig. 5, this operation is provided by transistor P1. P1 is only responsive to "SIG1", the "control signal".

Claims 2-12 are rejected for the reasons discussed above with claim 1.

In claim 13, lines 5-7, the phrase "which connects the J...charge pump circuits...in series" is not understood. First, if "J" is an "integer", it cannot be plural (i.e., it cannot be "circuits"). It appears that this should be changed to --Jth...charge pump circuit--. Second, it is not clear what this is being connected "in series" with. In lines 9 and 15, the parenthetical phrases "(J + 1)" and "(K+1)" are not understood as being parenthetical. It is suggested that these parentheses be removed. Lines 11-13 have similar indefiniteness as lines 5-7. Additionally, as presently recited, "J" and "K" can be the same value, which would not make sense. It is suggested that --and K≠J-- be inserted following " $2 \leq K \leq N$ " in line 12. The remaining indefiniteness is similar to that of claim 1.

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Claims 14-17 are deemed indefinite for similar reasons as claims 1-12.

Claim 18 is deemed indefinite for similar reasons as claim 13.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 13, 14 and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Tailliet (USPN 5,801,577).

With respect to claims 1, 13, 14 and 18, Tailliet discloses, in Fig. 7, a circuit comprising: “a first pump stage (Tc1)”; “a second charge pump stage (Tc2)”; “a third charge pump stage (Tc3)”; “a switching unit (Td0-Td2)”; “a first switch signal (signal at node B1)”; “a second switch signal (signal at node B2)”; and “a control signal (CPX)”, all connected and operating similarly as recited by Applicant.

With respect to claims 19 and 20 are, clearly the above circuit to Tailliet will provide the recited method.

Allowable Subject Matter

Claims 2-12 and 15-17 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

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None the of cited prior art references disclose that the boosting circuit further comprises “first” through “fourth” switching sections and the recited responsiveness to the “first switch signal”, the “second switch signal” and the “control signal”.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terry Cunningham whose telephone number is 571-272-1742. The examiner can normally be reached on Monday-Thursday from 7:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Timothy P. Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TC
May 2, 2005


Terry D. Cunningham
Primary Examiner
Art Unit 2816